Abstracts

Computer-Aided Design of Circular Ridged Waveguide Evanescent-Mode Bandpass Filters Using the FDTLM Method

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This paper describes the analysis and design of a circular ridged waveguide evanescent mode bandpass filter. Two and three resonators filters are presented for the 30GHz range. Insertion loss is typically below 1dB and return loss is better than 20dB on the average. The full-wave FDTLM method is used to compute the generalized s-parameters of the overall filter structures including the effect of finite metallization thickness and mode interaction between filter discontinuities. A comparison to other filter structures in circular waveguides shows excellent agreement between measured and computed results.

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